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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,153	08/24/2001	Clemens Hauber	449122008400	1767
25227	7590	06/30/2005	EXAMINER	
MORRISON & FOERSTER LLP 1650 TYSONS BOULEVARD SUITE 300 MCLEAN, VA 22102			PHAN, TRI H	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,153

Applicant(s)

HAUBER, CLEMENS

Examiner

Tri H. Phan

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 5 is/are rejected.
- 7) ☐ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/24/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the Response/Amendment filed on August 24th, 2001. Claims 1-5 are now pending in the application.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The abstract of the disclosure is objected to because it includes two end-period (“.”) at the end of the Abstract. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims 1 and 3-5 are objected to because of the following informalities:

Regarding claim 1, line 9, the word “the” in front of the phrase “peak bit rate” should be correct to -- a -- for clarity.

In regard to claim 3, lines 3-4, the word “the” in front of the phrase “last time previously” should be deleted for clarity.

Regarding claim 4, line 1, the word “the” in front of the phrase “free residual transmission” should be correct to -- a -- for clarity.

Art Unit: 2661

In regard to claim 5, line 2, the word “the” in front of the phrase “free residual transmission” should be correct to -- a -- for clarity.

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mo, Chi-Chiang** (U.S.6,137,875; hereinafter refer as ‘**Mo**’) in view of **Herkersdorf et al.** (“Load Balancing for Variable Sized Connections with Dynamically Changing Bandwidth Requirements”, 1992, IBM Technical Disclosure Bulletin, Edition 10, pages 435-438) (hereinafter refer as ‘**Herkersdorf**’).

- In regard to claim 1, **MO** discloses in Figs. 1-3 and in the respective portions of the specification about the system and method for *determining the communication path in the communication network*, which comprise *conducting a plurality of connections via the corresponding plurality of trunks between two neighboring network nodes and which reserve transmission capacities on the trunks* (For example see Figs. 1-2; col. 3, lines 11-25), *determining the trunk using the algorithm* (“*hunting algorithm*”) *on which the connection is*

accommodated in accordance with an acceptance criterion ("traffic patterns") wherein the additional connection is accommodated on one of the trunks and the algorithm is applied to the plurality of trunks until the trunk having sufficient free transmission capacity is found ("trunk is not busy") and the connection is accepted or all trunks have been checked and the connection is rejected (For example see Figs.2-3; col. 3, lines 11-54; wherein the 'trunks are busy' return status is obvious as *"connection is rejected"*). **MO** does disclose about hunting algorithms (For example see col. 3, lines 46-48); but fails to explicitly disclose about using the *"bit rate threshold value"* in determining the hunting algorithms such as *"fixed reference point"* and *"variable reference point"*. However, such implementation is known in the art.

For example, **Herkersdorf** discloses in 'Load Balancing for Variable Sized Connections with Dynamically Changing Bandwidth Requirements' about the path hunting strategies (*"hunting algorithm"*), e.g. 'load balancing', for supporting both fixed sized connections (*"fixed reference point"*) based on the initial threshold 'T' (wherein the initial threshold is based on the link's capacity, e.g. *"bit rate threshold value"*) as well as connections with dynamically changing bandwidth requirements (*"variable reference point"*) based on the variable threshold (*"peak bit rate"*).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to combine the hunting algorithm as taught by **Herkersdorf**, by implementing the use of the dynamic threshold value into the **MO**'s hunting algorithm, with the motivation being to improve the ability to support both fixed sized connections as well as connections with dynamically changing bandwidth requirements based on the variable threshold in load balancing for variable sized connections.

- Regarding claim 2, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **MO** further discloses about the Forward Linear in the hunting algorithm (For example see 48-54) and **Herkersdorf** also disclose about the sequential hunting strategy; wherein, it is obvious that any trunk can be the “first trunk” in the plurality of trunks in the Forward Linear or sequential hunting strategy.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to define the “fixed reference point” is the first trunk in the plurality of trunks into the hunting algorithm as taught by **MO** or **Herkersdorf**’s hunting strategies, with the motivation being to define the start point for the Forward Linear or sequential hunting strategies.

- In regard to claims 4 and 5, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **MO** does disclose about the selecting trunk’s decision (“*check is made in accepting the connection*”; For example see Fig. 3; wherein the selecting trunk’s decision is made based on the condition of ‘trunks are busy or available’ as claimed in the claim invention 5), but fails to explicitly disclose about the “*free residual transmission capacity ($Cr(Ti)$)*” from a physical transmission capacity of the trunk and wherein the capacity is reduced by the sum of the peak bit rates of the currently active connections of the trunk. However, such implementation is known in the art.

For example, **Herkersdorf** also discloses about the available link’s capacity (“*free residual transmission capacity ($Cr(Ti)$)*”) from the total path capacity in determining the

Art Unit: 2661

dynamic threshold without exceeding the maximum path capacity (*"sum of the peak bit rates of the currently active connections"*).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to define the available link's capacity as taught by **Herkersdorf** into the hunting algorithm **MO**'s hunting strategies, with the motivation being to determine the trunk is available or not.

Allowable Subject Matter

7. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if amended to overcome the objection set forth in this Office action and rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shah et al. (U.S. 5,917,804), **Agrwal et al.** (U.S. 5,590,176), **Ma et al.** (U.S. 5,953,338) and **Szlam et al.** (U.S. Re. 36,416) are all cited to show devices and methods for improving load balancing in the telecommunication architectures, which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

Art Unit: 2661

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tri H. Phan
June 24, 2005



BRIAN NGUYEN
PRIMARY EXAMINER